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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,803	12/12/2003	Ju-Long Lee	B-5325 621558-0	3872

7590 02/28/2005

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EXAMINER
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VU, PHU

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

11A

<b>Office Action Summary</b>	<b>Application No.</b> 10/735,803	<b>Applicant(s)</b> LEE ET AL.	
	<b>Examiner</b> Phu Vu	<b>Art Unit</b> 2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12/03/2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-7, 12-18 is/are rejected.
- 7) ☒ Claim(s) 4,5,8-13,19 and 20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claim 1-3, 6-7, and 21 are rejected under 35 U.S.C. 102(b) as being anticipated by Cheng et. al US Publication No 2002/0054248.** Cheng teaches a flat panel display comprising a plurality of gate lines (fig. 3 element 22) and plurality of data lines (fig. 3 element 21) intersecting to define a plurality of pixel regions (fig. 3 area between data lines and gate lines), a plurality of pixel electrodes disposed in the pixel regions respectively, a plurality of shielding metal lines disposed between the pixel electrodes and data lines in the pixel regions respectively, and at least two first backup (fig. 3 elements A & B) wires across the adjacent first shielding metal line and data line wherein the first backup wires are isolated from the data lines or the first shielding lines or isolated from both of them.

**Regarding claims 2 and 6,** there is a conductor that connects the shield line to the data line formed at points A and B of figure 3. Since it connects the shield line to the data line and vice versa these can both be considered 'backup wires' that extend from the shield and data line. Therefore, this limitation is inherent.

Regarding claims 3 and 7, the overlap points of the first backup wires and the first shielding metal lines act as a plurality of repair points (see fig. 3 elements A & B).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 14-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheng as applied to claim 1 above and further in view of Yang et. al US Patent 6,628,368.**

**Regarding claim 14,** Cheng teaches all the limitations of claim 14 except a plurality of second shielding metal lines disposed between pixel electrodes and the gate lines in the pixel regions respectively each of the first shielding metal line separated from the others and at least two backup wires across the adjacent second shielding metal line and gate lines or the second shielding metal lines or isolated from both of them. Cheng does however teach this same structure with the data line in place of the gate line. Yang teaches a similar redundant line structure that where the same repair structure that is used on the data lines is also applied to the gate lines to allow for the repair of gate lines in addition to the data lines (see Yang cover figure and abstract). Therefore, at the time of the invention it would have been obvious to incorporate repair features from the data lines to the gate lines to have added ability to repair the gate lines.

**Regarding claim 15 and 17,** the primary reference shows a connection between the data line and shielding line (fig. 3 point A and B) and therefore will extend from each

**Regarding claims 16 and 18**, the primary reference shows the overlapping point as the repair point (see fig. 3 points A and B). Also, as presented in claim 14 the data line and gate line can under the same repair methods, which was previously addressed (see claim 14 rejection).

**Regarding claim 22**, the only limitation not previously addressed is in the event of a defect, the backup wires are electrically connected between the data lines and first shield line, and a second set electrically connected to the second shield line and gate line. This limitation is inherent to the primary reference since it shows an electrical connection between a shield line and broken data line (see fig. 3 elements A and B). Motivation to apply this technique to another gate line and shield line was previously addressed in claim 14 rejection.

***Allowable Subject Matter***

**Claims 4-5, 8-13, and 19-20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

**Regarding claims 10-13, and 19-20**, there is no prior art of record that teaches the flat panel display as in claim 1 with backup lines isolated from both the line to be repaired (gate or data) and the corresponding shield line.

**Regarding claim 4 and 8**, there is no prior art of record that teaches a flat panel display as in claim 1 with the first shielding metal line with backup wires the first

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shielding metal layer, and gate lines in a first layer and the data lines in a second metal layer.

**Regarding claims 5 and 9**, there is no prior art of record that teaches a flat panel display as in claim 1 with the first shielding metal line with data lines in a first metal layer and first backup wires, first shielding lines, and gate lines in the second metal layer.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phu Vu whose telephone number is (571)-272-1562. The examiner can normally be reached on 8AM-5PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571)-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Phu Vu  
Examiner  
AU 2871

  
**ROBERT H. KIM**  
**SUPERVISORY PATENT EXAMINER**  
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